## Common Multiples: Challenging

This Venn diagram shows how Paddy is placing some numbers. Paddy has already placed 2, 3, 5, 6, 10, 15 and 16.


Place the following numbers into the correct spaces of the Venn diagram: 9, 12, 25, 30, 47 and 52. Use words, symbols or diagrams to solve the problem. Also, explain in words the steps you took to solve the problem and why you took those steps.

1. What do you see?
2. What are the multiples of 3 and 5 ?
3. Can you predict what other numbers might go into the shaded area?
4. What numbers go outside the circles?
5. Can you predict any other numbers that should go outside the circles?
6. Can you predict what the problem will ask you to do?
7. Read the problem.

First I studied the diagram because $\qquad$
Second I read the problem because $\qquad$
Next, I placed 9 and 12 in the circle marked "Multiples of 3" because $\qquad$
Next I placed 25 in the circle marked "Multiples of 5" because $\qquad$
Next I placed 30 in the shaded part of both circles because $\qquad$
Then, I placed 47 and 52 outside the circles because $\qquad$

